



NEWSLETTER of the Wisconsin Entomological Society

Volume 8 Number 2

Dean B. Faber, Editor

November, 1980

CONTENTS:

Forum	2
WES Meeting Notice	2
WES June Collecting Trip	3
Wisconsin's Lupine Feeding Butterflies	4
by George Balogh	
News of Members	8
Bait Traps for Lepidoptera Collecting	9
by Les Ferge	

EDITOR'S NOTES:

Once again the response to the call for NEWSLETTER contributions has been excellent. I'd like to express my thanks to all who submitted articles, letters, and news. Due to the total length of the various submitted materials, the WES membership list installment and the publications of interest section will be omitted from this issue of the NEWSLETTER, but they will return in future issues. I also hope to include new installments in the Famous Wisconsin Entomologists series. Contributed articles for this series would be very much appreciated.

On behalf of the entire membership I'd like to thank Alan Young, Gary Noonan, and Susan Borkin for organizing and hosting a very enjoyable WES meeting at the Milwaukee Public Museum on October 11. The tour of the insect collections was interesting and informative; the cheese, cookies, wine, and cider were delicious; and the conversation was stimulating. The meeting was a great success and a good time was had by all.

I was thinking in early Sept. that there really hadn't been an "insect of the year" for Wisconsin and the other midwestern states in 1980. Every year since I moved to the Midwest in 1977 there has been at least one species which reached what seemed like epidemic proportions and then faded into relative obscurity in following years. In 1977 it was the alfalfa weevil (*Hypera postica*); in 1978 it was the vexans mosquito (*Aedes vexans*); in 1979 it was grasshoppers (*Melanoplus* spp.). But 1980 had me stumped until I talked to Phil Pellitteri. In answer to my query his immediate response was: "What about the field crickets?". Phil of course, was right. In southern Wisconsin at least, they were ubiquitous last summer; no doubt a result of the abnormally high rainfall. *Gryllus* spp. clearly qualify as the most unusually abundant species of insects for 1980.

The NEWSLETTER of the Wisconsin Entomological Society is published several times yearly at irregular intervals. Please send all news, notices, and contributions for the NEWSLETTER to: Editor, Wisconsin Entomological Society NEWSLETTER, c/o Insect Research Collection, Dept. of Entomology, University of Wisconsin, Madison, Wisconsin 53706

FORUM:

Dear Editor:

Your last newsletter (May 1980) was excellent. I believe it plays an important role in the Society. Thanks to you and others we have a renewed interest in the Wisconsin Entomological Society. There are a number of young faculty members in the Entomology Department at Madison who have taken an interest in the Society. The attendance at the recent meetings (between 30 and 40) has been gratifying. The society will benefit much from your efforts in publishing an excellent newsletter. Keep up the good work.

Wendell E. Burkholder

Wisconsin Lepidopterists (Special Request!):

We are requesting information regarding Papilio glaucus food plant records and especially locality data and capture dates for any P. glaucus glaucus dark morph females. If you would be willing within the next 2 or 3 weeks to jot down the County and date of any dark form female glaucus captured in or near Wisconsin, we will include such data (in map form; with acknowledgements) in a forthcoming publication dealing with coevolution and host race formation of butterflies. Also, any female locality data and host plant records for P. g. canadensis would be extremely valuable in this endeavor. Replies by mid-November would be most useful.

Also, if you know of other collectors who might be able to supply additional locality or food plant information, we would be grateful if you share this notice with them. Since we anticipate that a considerable amount of time will be invested in rearing and bioassaying Papilio glaucus larvae this (1981) field season and for several years to come, any information regarding local flight times or "livestock" contributions would be sincerely appreciated (P. g. canadensis and/or P. g. glaucus). We would be glad to discuss this research project with all interested persons, so please stop by 240 Russell Laboratories anytime you're in Madison. Our phone number is 608-263-6377. The lab is directly across from the main office (Entomology).

Mark Scriber,
Assistant Professor

Mark Evans, Specialist

Department of Entomology
University of Wisconsin
Madison, Wisconsin 53706

WES MEETING NOTICE:

The November meeting of The Wisconsin Entomological Society will be held in room 1 Russell Labs, 1630 Linden Drive, Madison, Wisconsin at 7:30 P.M. on Thursday November 13, 1980. Dr. Daniel Mahr of the UW Dept. of Entomology will be speaking on "The History of Biological Control: a California Perspective". Note that this month's meeting is on a THURSDAY.

W. E. S. COLLECTING TRIP - JUNE 28, 1980

The weather proved to be quite cooperative for the summer collecting trip, which was held in Iowa County, a few miles northwest of Barneveld. Sunny and hot conditions prevailed during the day, ideal for butterflies as well as many other insects. The clear sky and full moon that night kept the moth catch a bit low, however. A 15 watt blacklight trap just can't compete with that bright moon. Eight people attended, and all enjoyed the fine day and the hospitality extended by the Burkholders, who graciously invited the Society to collect on their land.

Collecting was done in two areas: an old field and marsh area along Trout Creek - part of a state wildlife area managed by the DNR; and the oak-hickory woods around the Burkholder cabin. Practically all the butterflies listed below were taken in the marsh area, and all the moths were found near the cabin.

LYCAENIDAE

Harkenclenus titus

NYMPHALIDAE

Polygonia comma

Nymphalis j-album (scarce in S. Wis.)

Chlosyne gorgone carlota

(larvae found on sunflower and
Jerusalem artichoke)

Euphydryas phaeton

Boloria bellona

Speyeria cybele

SATYRIDAE

Lethe eurydice

Lethe anthedon

SPHINGIDAE

Paonias myops

Darapsa myron

AMATIDAE

Scepsis fulvicollis

Ctenucha virginica

ARCTIIDAE

Hypoprepia fucosa

Halisidota tessellaris

Pyrrharctia isabella

Spilosoma virginica

Haploa lecontei

NOCTUIDAE

Amathes c-nigrum

Lacinipolia renigera

Caenurgina erechtea

Pseudaletia unipuncta

NOTODONTIDAE

Heterocampa manteo

LASIOCAMPIDAE

Malacosoma americana

ZANOLIDAE

Apatelodes torrefacta

LIMACODIDAE

Limacodes biguttata

Wisconsin's Lupine Feeding Butterflies
and Their Pine Barrens Habitat
by George Balogh

Over the past decade Wisconsin Lepidopterists have been spending much of their field time collecting specialized habitats. One such habitat is the Pine Barrens. It is characterized by very sandy soils of glacial outwash origin, sparse tree cover (mainly Jack Pine, Pinus banksiana and Black-Jack Oak, Quercus ellipsoidalis), prominence of heaths (including Huckleberry, Gaylussacia baccata, Blueberry, Vaccinium angustifolium, and Bearberry, Arctostaphylos uva-ursi), and occurrence of a number of prairie plants (including Pasque Flower, Anemone patens, Bird-foot Violet, Viola pedata, Pucoon, Lithospermum spp. Prairie Phlox, Phlox pilosa, Blazing star, Liatris spp., Big and Little Bluestem Grasses, Andropogon gerardi and A. scoparius respectively). Curtis (1959) provides a good description of this community.

One plant that is conspicuous on Pine Barrens during its blooming period in late May and early June is Blue Lupine, Lupinus perennis, the only Lupine native to Wisconsin. Its blue spikes can be seen even while driving on the highway, such as along I-94 through Juneau, Monroe, and Jackson counties. Blue Lupine is a plant of sandy soils in the Southern Great Lakes Region as far west as Eastern Minnesota, and also occurs in the Atlantic and Gulf Coast regions. Fassett (1939) provides range maps for the plant in Wisconsin and Eastern North America.

Three species of butterflies are closely associated with Blue Lupine in Wisconsin and are known to utilize it as a larval foodplant. They are: 1) Lycaeides melissa samuelis (The Karner Blue), 2) Callophrys (Incisalia) irus (The Frosted Elfin), and 3) Erynnis persius (The Persius Dusky-Wing). Illustrations and descriptions of these species are provided in Howe (1975), Klots (1951), and Ehrlich and Ehrlich (1961). It is unfortunate that all of these butterflies can be confused with similar species in Wisconsin if one is not familiar with them. Ebner (1970) was not aware of any recent records for these species when he wrote Butterflies of Wisconsin.

Lycaeides melissa samuelis is the subspecies of the Melissa Blue that occurs from Eastern Minnesota to New Hampshire. Blue Lupine is its only known larval foodplant, whereas the nominate subspecies (L. m. melissa) that occurs on the Great Plains and westward feeds on a variety of Legumes. The larvae of L. m. samuelis feed on the foliage of the Lupine plant, and they are known to be tended by ants for their sweet glandular secretions. Dirig (1976) has described the life history and habits in detail. Masters and Karpuleon (1975) were first to recognize the occurrence of this subspecies in Wisconsin. They observed oviposition on Blue Lupine in Eau Claire county. I have seen females oviposit on the plant in Wood county. Females enclosed in a jar with sprigs of the plant oviposit freely. So far L. m. samuelis has been collected in the following Wisconsin counties: Adams, Burnett, Clark, Douglas, Eau Claire, Jackson, Juneau, Menomonee, Monroe, Shawano, Polk, Portage, Waushara, and Wood. Peak flight periods are late May to early June, and the last half of July.

Ebner (1970) attributed all Wisconsin Lycaeides to the similar Lycaeides argyrognomon (The Northern Blue). This species was first collected in the state by Louis Griewesch (1953), and populations in the Northern Great Lakes region have been described as a separate subspecies, L. a. nobokovi by Masters

(1972). Like L. m. samuelis, this species occurs in sandy Pine Barrens habitats in Wisconsin, but it is single brooded (late June to early July), and most colonies lie outside of the range of Blue Lupine (Northeastern Wisconsin). This past summer Leslie Ferge and Mogens Nielsen discovered that females oviposit of Dwarf Bilberry, Vaccinium caespitosum in Florence county (Leslie Ferge, in litt.). All recent Wisconsin records for L. argyronomon are from Florence and Oconto counties. There are older records from Shawano, Menomonee, and perhaps Brown counties.

Nobokov (1949) revised the members of the genus Lycaeides. That reference should be consulted for descriptions of other North American Lycaeides populations.

Callophrys (Incisalia) irus is one of five species of Incisalia (Elfins) known to occur in Wisconsin. In the Midwest, Blue Lupine is probably the sole larval foodplant. In the Eastern United States it also utilizes a False Indigo species, Baptisia tinctoria. Cook (1906) provides a good description of the butterfly's life history for a Lupine feeding population near Albany, New York. The larvae feed upon the flower parts of the plant. The species appears to be the most localized and uncommon of the Lupine associated butterflies in Wisconsin. It was first taken here in 1977 and all records are from three localities in two counties (Adams and Juneau). Adults fly from mid to late May.

Erynnis persius belongs to the so called "Persius complex" of the genus Erynnis. This includes E. lucilius and E. baptisae, the larvae of which feed on Columbine (Aquilegia canadensis) and False Indigo (Baptisi spp.) respectively. E. persius has been observed to use Lupine as a foodplant in Michigan and in Wisconsin (Mogens Nielsen and Fay Karpuleon, in litt.). All Wisconsin material is Lupine associated. The species has a single generation each year (mid to late May), whereas the other members of the complex are multibrooded (late May, July, and sometimes late August). So far E. persius has been collected in Wisconsin in Adams, Burnett, Eau Claire, Juneau, Monroe, Polk, and Wood counties. The species has an extensive range, especially in Western North America, and utilizes other Legume species as foodplants in other portions of its range. This species complex remains poorly understood and much more work needs to be done (see Burns, 1964).

Other butterflies associated with Pine Barrens listed with their foodplants and approximate time of flight are: 1) Atrytonopsis hianna (Blue Stem Grass, Andropogon spp., late May to early June); 2) Hesperia metea (Blue Stem Grass, Andropogon spp., mid to late May); 3) Hesperia sassacus (Grasses, late May to early June); 4) Hesperia leonardus (Grasses, late August to early September); 5) Erynnis martialis (New Jersey Tea, Ceanothus spp., late May to early June); 6) Chlosyne gorgone (probably Wild Sunflower spp., Helianthus spp., multibrooded); 7) Euchloe olympia (Rock Cress, Arabis lyrata, mid to late May); 8) Callophrys (Incisalia) niphon (Pines, Pinus spp., mid to late May); 9) Callophrys (Incisalia) polios (Bearberry, Arctostaphylos uva-ursi, mid to late May); 10) Callophrys (Incisalia) augustinus (Blueberry, Vaccinium spp, mid to late May; 11) Callophrys (Incisalia) henrici (foodplant in Wisconsin not established, mid to late May); 12) Glaucopsyche lygdamus (Vetchling, Lathyrus spp., mid to late May). In addition, Oeneis chryxus stigulosa (Grasses, mid to late May), Phyciodes batesii (Asters, Aster spp., late May to early June), and Everes amyntula (foodplant in Wisconsin not established, mid to late May). All of these butterflies seem to be associated with Pine Barrens as well as the Bracken-Grassland community (Curtis, 1959) in the most northern parts of Wisconsin

I have prepared a map that shows the approximate location of Wisconsin's original Pine Barrens. Also included are the records for Blue Lupine as given by Fassett (1939). Much of the original Pine Barrens is now highly modified. Protection of large areas from fire has allowed forests to replace this community. Pine plantations have been planted on the sandy soils of the Pine Barrens. Finally, resort and residential development have also contributed to the decline of the Pine Barrens. Lupine has persisted largely in disturbed dandy areas such as roadsides. In some areas accidental clearing by fire and intentional clearing for the purpose of game management have provided good habitat for colonies of this sun-loving plant. Despite general habitat degradation, scattered excellent collecting areas can be found if one is willing to search the appropriate areas.

Two resources that can be used to help locate portions of Wisconsin with remaining Pine Barrens habitat are Hole (1976) and Finley (1976). Some of the largest tracts are in the Northwestern and West-Central portions of the state including Bayfield, Douglas, Burnett, Jackson, Monroe, Wood, Juneau, and Adams counties. Sandy soils along the Mississippi and lower Wisconsin rivers may also produce some of the Pine Barrens associate species including those that feed on Lupine. More collecting in these areas, especially during the spring, needs to be done.

It is hoped that this note will encourage others to collect the Pine Barrens and similar sandy habitats. For several years I have been gathering data on the butterflies of such areas. Any additional information would be greatly appreciated. I especially would like to hear from workers dealing with orders outside the Lepidoptera about other insects that are found in such habitats. Any correspondence on this subject would be welcomed.

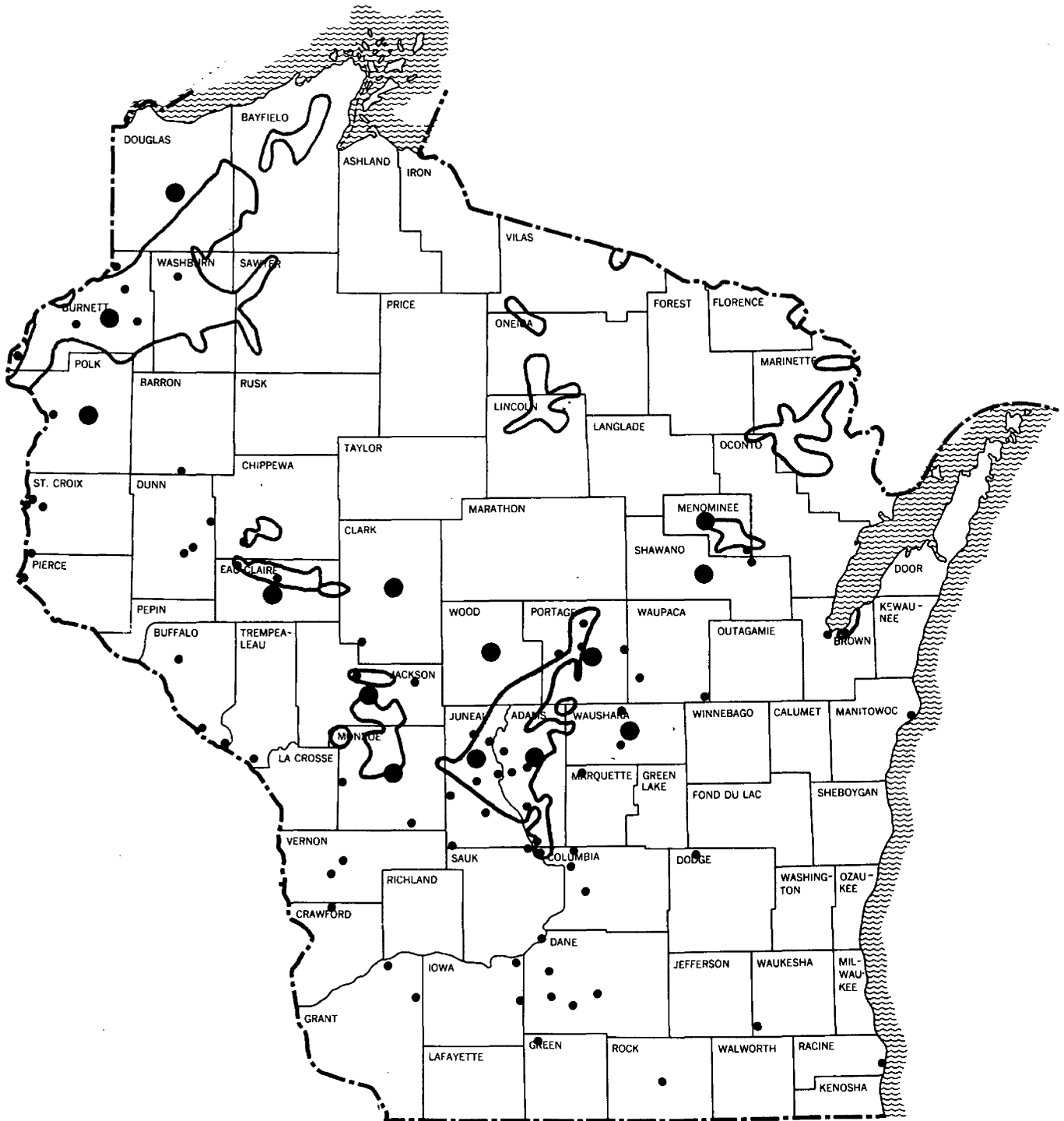
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Acknowledgements

A number of individuals have provided information, help, and companionship over the past years including Leslie Ferge, Roger Kuehn, Robert Borth, Fay Karpuleon, and Mogens Nielsen. I thank all of them for their help in this continuing project.

Legend for Map

On the facing page is a map of Wisconsin showing regions of the state that were originally Pine Barrens outlined in black (after Hole, 1976). For more detailed maps of the same area see Hole (1976) and Finley (1976). Small dots are records for Blue Lupine (Lupinus perennis) after Fassett (1939). Those counties in which Lupine associated butterflies have been collected are indicated with large dots (these are not exact localities for the butterflies). Although there are many records for Blue Lupine outside of Pine Barren areas, field observations seem to indicate that the largest stands of this plant occur in Pine Barrens habitats.



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NEWS OF MEMBERS:

Robert A. Haack- completed the Master of Science degree
was awarded the Entomological Society of America North
Central Branch Outstanding Master of Science Student
will Ph.D. studies at the University of Florida, Gainesville
with Dr. R.C. Wilkinson a former Wisconsin student (1961).

The following faculty of the Department of Entomology attended the XVIth
International Congress of Entomology at Kyoto, Japan in August 1980:

D.M. Benjamin	R.K. Chapman
W.E. Burkholder	R.L. Jeanne
S.D. Carlson	D.M. Norris

Mark O. Harrell- completed the Ph.D. degree on Sept. 24, 1980
has accepted the position of Assistant Professor/ Assistant
Forester in the Dept. of Forestry, Fisheries, and Wildlife
at the University of Nebraska, Lincoln, Nebraska.

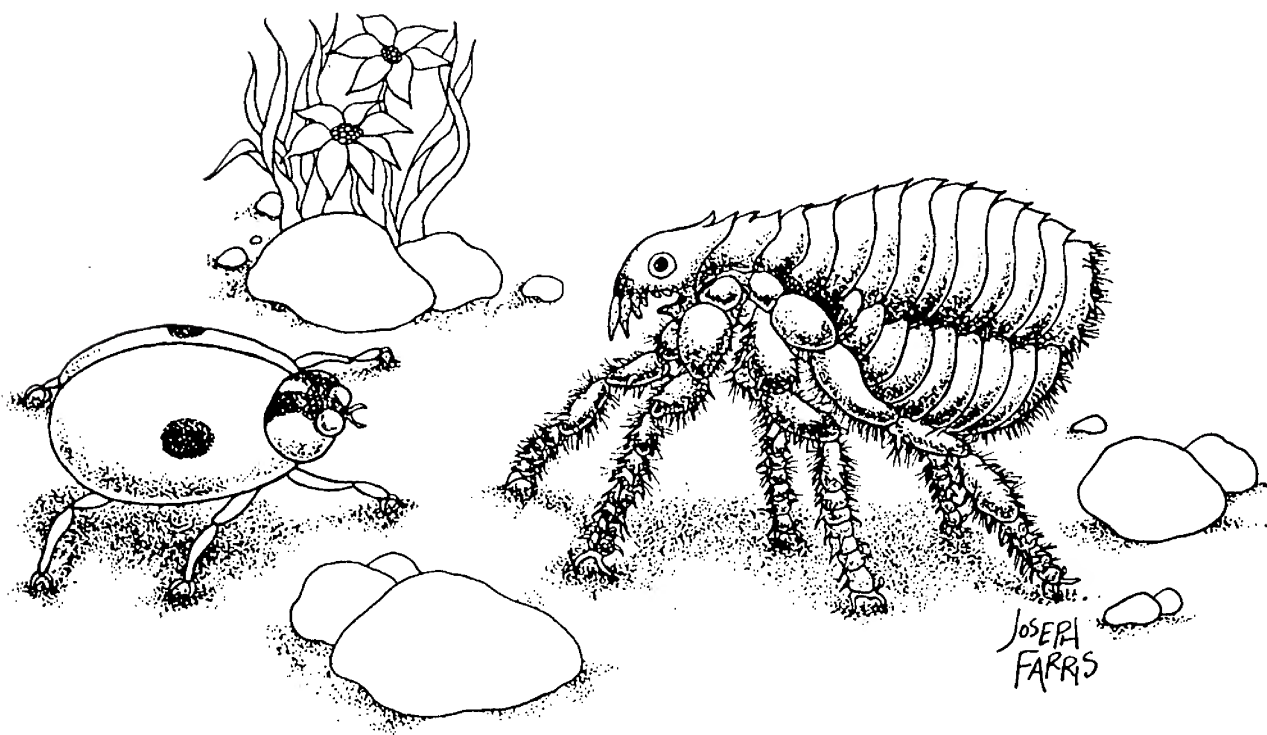
The following University of Wisconsin Entomology Dept. faculty
were invited guests of the People's Republic of China during August 1980:

R.K. Chapman-

visited and lectured at

D.M. Benjamin-

University Agricultural Colleges
gave a lecture series on Forest Entomology
at the Academy of Forestry



"I know *who* I am but I don't know *what* I am!"

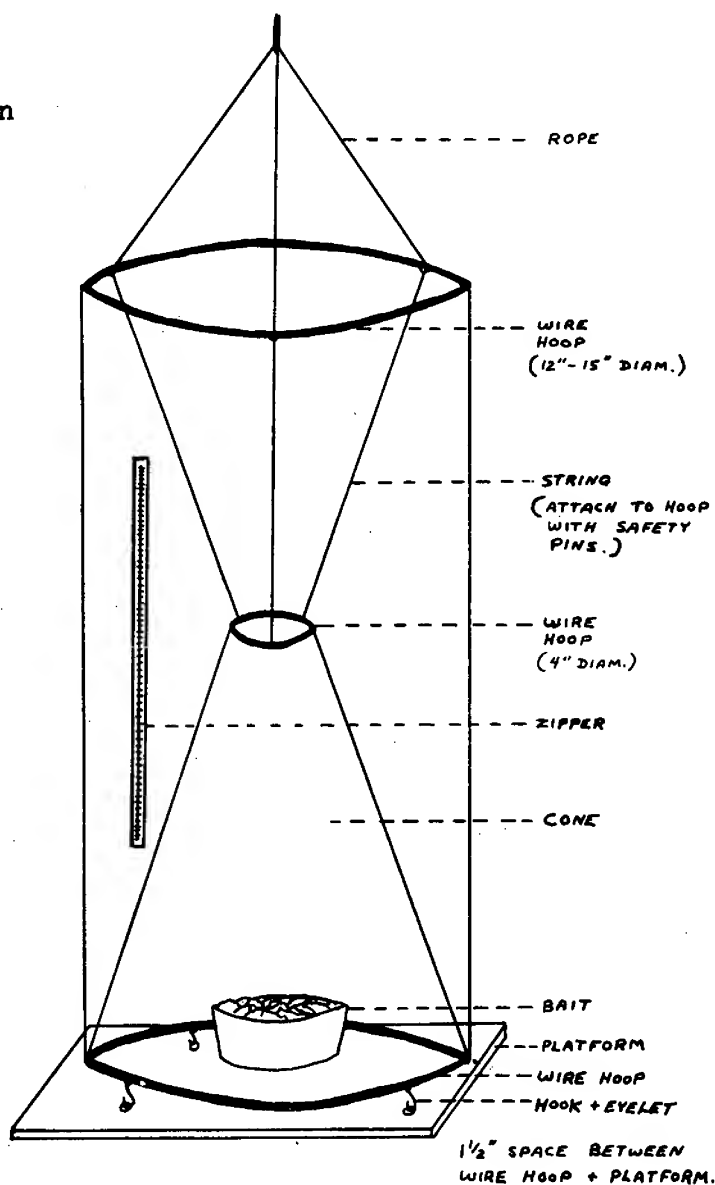
THE USE OF BAIT TRAPS FOR LEPIDOPTERA COLLECTING

by Les Ferge

Various baits to attract and collect Lepidoptera have been utilized by entomologists for many years. Many butterflies are attracted to such things as rotting fruit and carrion, and moths have long been collected using the technique of "sugaring." The use of bait traps is a fairly recent development. A number of Lepidopterists began using this type of bait trap after its design and use were reported by Platt (1969, J. Lepid. Soc. 23(2): 97-101). A few other orders of insects may be taken, particularly Diptera, Hymenoptera, and some Coleoptera.

The use of bait traps has obvious advantages. Limited time in the field can be used more efficiently by having traps sampling one area while the collector works elsewhere. Traps kept in an area over an entire season are more likely to turn up uncommon species often missed by random collecting trips.

The traps may be constructed with little difficulty, following the drawing on the right. The materials are: nylon mosquito netting (available from Army surplus stores or camping equipment dealers) for the outer cylinder, top and inner cone; heavy wire to make the supporting hoops; plywood for the bottom platform; screw eyelets and hooks to suspend the platform below the bottom hoop; and a few pieces of rope and string to hang the trap and support the cone as indicated. The zipper may be omitted, but it makes specimen removal much easier. The dimensions most often used are: 12" to 15" diameter, 36" height, 18" cone height, 4" diameter opening at top of cone, and a $1\frac{1}{2}$ " space between the bottom edge of the trap and the platform. Further experimentation with the cone opening size and shape may improve specimen retention. Some of the Underwing moths are nearly as adept at getting out as they are at finding their way in.



In use, the trap is suspended from a tree limb in a protected place, usually in a forest opening or near the edge. The bait platform should be at least four feet above the ground. Specimens are taken out through the zippered opening (if so equipped) using a killing bottle. In traps without a zipper, the platform is removed and specimens taken out by reaching up through the cone opening. Specimens are best removed early in the morning, when cool temperatures keep them somewhat less active. The cone support strings should be attached with easily removed fasteners, such as safety pins, so that the cone may be inverted to release unwanted specimens or clean out dead insects.

The bait is placed in a pint plastic freezer container, or a bowl, and centered on the platform. Rotten apples are very attractive to many Lepidoptera, although any fermenting fruit may be utilized. This bait can be periodically fortified with a little brown sugar dissolved in beer, or some molasses. A piece of sponge may be placed in the bait container to provide the specimens with a dry landing place.

The following is a list of species taken in bait traps within the state of Wisconsin. Additional data was contributed by Jim Parkinson, who has used bait traps in central and northeastern Wisconsin. The moth list is by no means complete; only the more popular groups, the Sphingidae and Catocala (Underwing moths) are included.

NYMPHALIDAE

Asterocampa celtis
Asterocampa clyton
Limenitis arthemis arthemis
Limenitis arthemis astyanax
Limenitis archippus
Vanessa atalanta
Nymphalis antiopa
Nymphalis j-album
Polygonia interrogationis
Polygonia comma
Polygonia faunus
Polygonia satyrus
Polygonia progne
Speyeria atlantis
Speyeria cybele
Euptoieta claudia

SATYRIDAE

Lethe anthedon
Lethe eurydice
Lethe appalachia
Euptychia cymela
Cercyonis pegala nephele

SPHINGIDAE

Sphinx poecila
Sphinx kalmiae
Amphion nessus
Sphecodina abbotti
Darapsa myron
Darapsa pholus

NOCTUIDAE (Catocala)

innubens	parta
piatrix	semirelict
epione	cara
antinympa	amatrix
serena	concupens
judith	amestris
residua	coccinata
retecta	ultronia
palaeogama	crataegi
subnata	mira
neogama	blandula
ilia	grynea
cerogama	praeclara
relict	similis
unijuga	micronympha
briseis	amica

Euparthenos nubilis

WISCONSIN ENTOMOLOGICAL SOCIETY

MEMBERSHIP APPLICATION

Please Print:

Last Name First Name
Address: _____
Street City State Zip

Organization represented (if any)

Title or Occupation Phone: (include area code)

Individual membership (\$2.00 per year)

Organization membership (\$10.00 per year)

Sustaining membership (\$5.00 per year)

Patron membership (\$25.00 or more per year)

General Interest Area

Aquatic Insects _____ Collecting and/or Taxonomy

4-H or Scout Member _____ Insect Photography

Extension Worker _____ Physiology

Life History, Biology, & Behavior _____ Apiculture

Other _____ Pest Control
Specify _____

Specific Interests (Order, Family, Genus) _____

If you are an authority for certain insect taxa, would you be willing to
identify Wisconsin specimens for members? _____ Yes _____ No

Make checks payable to Wisconsin Entomological Society and mail to the
Treasurer, Wis. Entomol. Soc., Dept. of Entomology, 237 Russell Labs., U. Wisc.,
Madison, Wisc. 53706 .